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KAMO POWER

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
FEDERAL COMMUNICATION COMMISSION
Washington, D.C. 20544

In the matter of

Redevelopment of Spectrum to
Encourage Innovation in the use
of New Telecommunication
Technologies

ET Docket No. 92-9

To: The Commission

COMMENTS OF KAMO ELECTRIC COOPERATIVE, INC.

Pursuant to Section 1.415 of the Commission's Rules, KAMO Electric Cooperative, Inc. hereby respectfully submits its comments on the Notice of Proposed Rulemaking (NPRM), FCC 92-20, released February 7, 1992, in the above captioned matter.

I. Introduction

KAMO Electric Cooperative is a non-profit electric generation and transmission utility that provides wholesale electric power to 17 member cooperatives located in Southwest Missouri and Northeast Oklahoma. Collectively, these 17 member distribution cooperatives supply electricity to some 250,000 owner-consumers in this two state area. KAMO operates and maintains 2,323 miles of energized transmission line and delivers electric power at over 200 substations. KAMO owns a 38% undivided interest in the Grand River Dam Authority Unit No. 2, a coal-fired generation plant with a net capacity of 520 megawatts, and is one of the six generation and transmission utilities that own Associated Electric Cooperative, Incorporated, Springfield, Missouri, a wholesale power cooperative with a generation capacity of 2,358,000 kilowatts and inter-connections with 17 other major power systems in the Midwest.

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KAMO is a user of 960 MHz point-to-point microwave, low density 2 GHz (2130-2150 and 2180-2200MHz) point-to-point microwave, high density 2 GHz (1850-1990 MHz) point-to-point, and 6 GHz (6525-6875 MHz) point-to-point microwave. In total KAMO operates 73 hops of microwave in our service area of Southwest Missouri and Northeast Oklahoma. KAMO's microwave system includes thirty five (35) microwave hops operating in the 1850-2200 MHz frequency band for an approximate investment of \$1,840,000. This microwave system is not only used by KAMO, but by its 17 Member Distribution Systems for the reliable, essential communications required for the operation of its electrical generation, transmission and distributions systems. This microwave system is also used to provide critical communication needs for Associated Electric Cooperative (AECI) and other electric utilities who are interconnected to AECI's generating and transmission power system which is part of the electric power grid in this Southwest Power Pool region.

II. The 1850-2200 MHz Band Should Not Be Reallocated For The Creation Of A Spectrum Reserve

KAMO opposes a reallocation of spectrum in the 1850-2200 MHz band for the creation of a spectrum reserve for development of emerging technologies. We believe that the proposed reallocation of frequencies at the 2 GHz would unfairly affect the rural electric cooperatives for the following reasons:

1. KAMO uses the high density 2 GHz frequencies bands (1850 GHz -1990 GHz) for its main backbone communication located in remote rural areas. The selection of this band is due to the propagation characteristics of 2 GHz which allows for longer paths with less fade than higher frequencies allow. This normally allows for less costs when installing a system which extends across a large remote area. Often frequencies are not available in the 2 GHz band. This forces us to the 6 GHz band to find suitable frequencies. Our concerns are that by eliminating the 2 GHz frequencies we would be penalized by:

- a. Incurring increased costs if we are forced to higher frequencies.
- b. Higher frequencies offer less reliability (more fade).
- c. Sufficient availability of higher frequencies have not been identified.
- d. KAMO owns and operates a 2 GHz system in Oklahoma which is connected to a 2 GHz system owned and operated by Grand River Dam Authority (GRDA), a state agency. This microwave is operated as a jointly owned single system. Under the proposed rulemaking, it is our understanding that GRDA being a state agency would be exempt, but KAMO could be required to move. This would disrupt both systems and unjustly penalize KAMO.

2. We use the low density 2 GHz frequency bands (2130 GHz -2200 GHz) for spurs off of the main microwave backbone. These spur hops provide communication to electric power substations and to member system offices. These spur hops are many

times shorter distances than backbone paths. The following are our concerns in this frequency band:

- a. Incurring increased costs if we are forced to higher frequencies.
- b. Sufficient availability of frequencies have not been identified in higher frequency bands or in lower 960 bands.
- c. Sufficient channel capacity (bandwidth) does not exist in the lower 960 MHz bands.
- d. The 6 GHz frequencies could not be used for many of these hops due to the FCC rules on minimum path lengths as stated in Part 94.79 which stipulates that minimum paths lengths are 17 meters in the 6 GHz bands.

It is our belief that the 2 GHz frequencies presently allocated to the Power Radio Service users, have and can continue to serve our critical needs. KAMO urges the Commission to consider alternate bands as a possible "home" for the spectrum reserve for the emerging technologies.

It has been suggested by some segments of the telecommunication industry (Utilities Telecommunication Council) that the needs of the emerging technologies could be addressed by using other frequencies bands which have unused spectrum available. Specifically the 2.5-2.69 GHz band presently used by the "wireless cable" and instructional television stations. This band would yield 190 MHz and the actual number of stations operating in this band is very small compared to the 29,000 private and common carrier microwave station in the 2 GHz band targeted in the NPRM. It is also suggested that the present users of the 2.5-2.69 GHz band could be accommodated in the common carrier 4, 6 and 11 GHz bands or to a portion of the 500 MHz of unoccupied spectrum in the 12 GHz band.

III. Conclusion

KAMO agrees that opportunities offered by emerging technologies could have some benefit to our society and that the Commission should be applauded for their efforts to identify and secure appropriate spectrum reserve for this purpose.

KAMO has very real concerns that these 2 GHz frequencies bands are being targeted with the underling thought that many of the users in these bands may have right of ways which could be used to install communication systems (fiber) which would not require any use of the airways. KAMO has in the last 15 years compared fiber vs microwave as well as other technologies in our feasibility studies and have found that the cost of fiber has typically been five (5) times more than the technology selected (microwave) for these projects. Therefore we have elected to not expose our members and their rate payers to the much higher costs associated with these non airwave systems.

KAMO also has had experience with the services provided by the regional telephone companies in our area and this service is totally unsatisfactory for most critical circuit needs. Unfortunately some of the rural areas that we service are still converting from party lines and do not have the facilities in place to provide dedicated high speed data circuits with the reliability and restoration required for the operation of an electrical power system.

We believe forced relocation from the 2 GHz band would place a unfair burden on our members and their rate payers. This is especially unfair to users of the private microwave service who have worked so diligently in building these microwave system and have finally began to realize the reliable and economic benefits that private microwave systems offer. For years the Rural Electric Cooperatives were considered slow growth users and now that are using the microwave frequencies heavily and efficiently they should not be penalized.

Wherefore, The Premises Considered, KAMO Electric Cooperative, Inc. respectfully requests the Commission to consider these comments in acting on the subject Notice of Proposed Rule Making.

Respectfully submitted,
KAMO Electric Cooperative, Inc.

by: 

Daymon G. Barton
Manager Telecommunication Services
KAMO Electric Cooperative, Inc.
P.O. Box 577
Vinita, Oklahoma 74301

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